

CALIFORNIA
ENERGY
COMMISSION

***INSTRUCTIONS
FOR SUBMITTING NUCLEAR
POWER PLANT-RELATED DATA***

COMMITTEE REPORT

February 2007
CEC-100-2007-003



Arnold Schwarzenegger, Governor

CALIFORNIA ENERGY COMMISSION

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DISCLAIMER

This report was prepared by the California Energy Commission's 2007 Integrated Energy Policy Report Committee as part of the 2007 Integrated Policy Report proceeding – Docket # 06-IEP-1. The 2007 Integrated Energy Policy Report will be considered for adoption by the full Energy Commission at its Business Meeting in Fall 2007.

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Abstract

The California Energy Commission is requesting that all utilities with operating or shut-down nuclear power plants provide data as noted below. These data will provide a foundation for the analyses and recommendations of the *2007 Integrated Energy Policy Report (IEPR)*. This information will be used to continue the nuclear policy assessment that was initiated for the 2005 IEPR, update the consultant status report *Nuclear Power in California: Status Report*, initiate information acquisition to support legislative mandates, and provide information needed to support the California Energy Commission's input into federal waste management proceedings.

Keywords

Nuclear, nuclear power plant, spent fuel, nuclear waste, data request.

Background

The California Energy Commission is requesting that all utilities with operating or shut-down nuclear power plants provide data as noted below. These data will provide a foundation for the analyses and recommendations of the *2007 Integrated Energy Policy Report*. This information is needed to continue the nuclear policy assessment that was initiated for the 2005 IEPR, update the consultant status report *Nuclear Power in California: Status Report*, initiate information acquisition to support legislative mandates, and provide information needed to support the California Energy Commission's input into federal waste management proceedings.

Public Resources Code (PRC) Section 25301 directs the Energy Commission to conduct regular assessments of all aspects of energy demand and supply. These assessments serve as the foundation for analyses and policy recommendations to the Governor, Legislature, and other agencies. The broad strategic purposes of these policies are to conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety.

To carry out these regular assessments of expected and needed electricity supplies, "the Commission shall conduct... (an) assessment of the availability, reliability, and efficiency of the electricity and natural gas infrastructure and systems including, but not limited to,...western regional and California electricity and transmission system capacity and use." (PRC Section 25303(a))[3]

If respondents have questions about the information being requested, Energy Commission staff will work with the utilities to clarify the information requests. General questions about these data requests should be directed to Barbara Byron at bbyron@energy.state.ca.us or by phoning (916) 654-4976.

Filing Instructions

The general instructions for responding to these data requests are provided below:

1. Each section and/or question identifies the specific nuclear power plant associated with the section's/question's data requests. We encourage Southern California Edison Co. (SCE) to coordinate responses with its co-owners for San Onofre Nuclear Generating Station (SONGS)-related data requests.
2. If the respondent believes certain data or information is confidential or not intended to be released publicly, the respondent should provide a specific rationale for claiming confidentiality (please see below). Further, the respondent should provide a reference to specific federal or state laws or regulations that provide the confidentiality treatment sought by the respondent.

3. Unless otherwise specified, the period for which documents are requested is **2001 through the most recent year that information is available (for example, 2006)**.
4. Unless otherwise specified, every effort should be made to provide the requested information in digital/electronic format such as CD/DVD-ROM, Adobe Portable Document Format (pdf) files, Excel spreadsheets, or similar formats. Links (URLs) to documents on Internet websites are acceptable. However, a URL link should be verified as working and must point to the specific document and not be general (for example, a general link to www.nrc.gov is not acceptable).

When to File

The Energy Commission requires that the utilities provide the Energy Commission the information, as described below, on or before March 31, 2007. At a later date, the IEPR Committee, which comprises two Energy Commissioners, may direct that additional data be filed to assess particular scenarios, topical issues, or policy proposals.

Who Must File

California utilities owning and/or operating the Diablo Canyon Nuclear Power Plant, San Onofre Nuclear Generating Station, Humboldt Bay, Rancho Seco, and Palo Verde are required to file information as indicated below. Please note: Where the information is available through another forum, utilities are asked to identify a web link and a contact person (name, phone number, and e-mail address).

What Must be Filed

For all filings, parties are requested to submit the following:

- A brief cover letter, addressed to the Energy Commission's Docket Office;
- A compact disc containing all required data; or
- A paper copy of required data if not available in electronic format.

Where to File

Submit all requested data to:

California Energy Commission
Docket Office
Attention: **Docket 06-IEP-1N**
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Data that is submitted with an Application for Confidential Designation, however, must be sent to the Executive Director of the Energy Commission rather than to the Docket Office, as explained in the next section.

How to Apply for Confidential Designation of Submitted Data

The Executive Director of the Energy Commission has the overall responsibility for determining what information provided to the Energy Commission is confidential. Information provided by private third parties may be designated as confidential by either of two methods. First, the Executive Director may grant an application for confidentiality. Second, the filer may file an attestation signed under penalty of perjury stating that information specifically identified in the filing falls within one of seven “automatically confidential” categories specified in Title 20, California Code of Regulations, Section 2505(a)(5)(B) and has not been previously released. This section outlines the application process.

The process for requesting a confidential designation for the data is described below. A more detailed description of this process is provided in Title 20 of the California Code of Regulations, Section 2501 et seq. (See *Energy Commission Regulations*).¹

Parties must make a separate written application to the Executive Director that specifies which data within the body of all submitted material warrants a confidential designation. A document or electronic file bearing a “confidential” stamp will not suffice. A formal application is necessary.

The following information items are needed by the Executive Director to make a confidentiality determination:

- 1) A printed cover letter bearing the following address:

B.B. Blevins, Executive Director
California Energy Commission
1516 Ninth Street, MS 39
Sacramento, California 95814-5504

- 2) The data. For this data request, the data must be submitted on a compact disc that bears the name of the utility and the following sub-docket number: **Docket #06-IEP-1N.**
- 3) A completed *Application for Confidential Designation* form, and

¹ California Energy Commission regulations can be found at:
<http://www.energy.ca.gov/2006publications/CEC-140-2006-001/CEC-140-2006-001.PDF>.

- 4) A signed and dated “penalty of perjury” certification printed on the utilities’ letterhead containing the following paragraph, signature line, and signature:

“I certify under penalty of perjury that the information contained in this application for confidential designation is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to make this application and certification on behalf of the applicant.”

Please note that the “penalty of perjury” certification is included in the *Application for Confidential Designation* form at the end of that form.

The four items listed above should be hand-delivered or mailed to the Executive Director’s office in a sealed package (or envelope) marked “Confidential.”

An *Application for Confidential Designation* form in portable document format (PDF) is provided within this publication as Appendix A. If, however, the applicant must create its own version of this form for any reason (for example, more space on the form is needed to provide a thorough response), we strongly encourage that the applicant’s version of the application duplicate the Energy Commission’s *Application* word for word.

The *Application* submitted to the Executive Director must contain the following information:

- 1) Identification of the information being submitted, including title, date, file size (for example, pages, sheets, MB), and sub-docket number;
- 2) Description of the data for which confidentiality is being requested;
- 3) Description of the length of time for which confidentiality is being sought, with an appropriate justification, for each confidential data category request;
- 4) Identification of applicable provisions of the California Public Records Act (Government Code Section 6250 *et seq.*), and/or other laws, for each confidential data category request;
- 5) A statement that describes how each category of confidential data may be aggregated with other data for public disclosure;
- 6) Description of how the information is kept confidential by the applicant and whether it has ever been disclosed to a person other than an employee of the applicant, and if so, under what circumstances.

If the filer is seeking confidential designation of information that is substantially similar to information that was previously determined to be confidential by the Commission, the application need only contain a certification, identical to that filed with the application for

confidential designation of new information, stating that fact and that all the facts and circumstances relevant to that prior determination of confidentiality remain unchanged.

Application packages deemed incomplete will not be reviewed by the Executive Director. Instead, incomplete application packages will be placed in a “suspense” file, and the filer will be notified by mail and by e-mail about the deficiencies in the application. The filer has 14 calendar days to correct the deficiencies and to deliver to the Executive Director replacement copies of the deficient cover letter, data (on compact disc and a printed copy), or complete *Application for Confidential Designation*, including the signed and dated “penalty of perjury” certification. If the Executive Director has not received the replacement copies after 14 calendar days from the date the letter was received, all information associated with the deficient application package will be deemed public information and docketed accordingly.

Once an application package is complete, the Executive Director of the Energy Commission has 30 days to render a decision regarding the confidentiality request. Confidentiality determination letters are signed by the Executive Director. If the letter states that the Executive Director has determined that the submitted data does not warrant confidential designation, then the applicant has 14 calendar days to appeal the Executive Director’s decision to the full Commission.

More specific questions about confidentiality may be directed to Fernando DeLeon at fdeleon@energy.state.ca.us or (916) 654-4873.

Nuclear Power Plant Data Requests

A. Environmental Impacts (Diablo Canyon, SONGS 2 & 3)

1. Please provide copies of data or copies of documents containing the data furnished to public agencies including reports, contracts, and will-serve letters, that document the following information on water supplies used for cooling and for ancillary services at each power plant. These ancillary services include drinking water, sewage, and fire suppression. Please provide the following information in gallons, for example, millions of gallons, per the unit of time specified for :
 - a. The daily average, daily maximum, monthly, and annual amounts of water use for plant cooling;
 - b. The daily average, daily maximum, monthly and annual amounts for all ancillary services such as for drinking water, sewage, and fire suppression.
 - c. The total monthly and total annual amounts of water used for all power plant purposes.
 - d. If the information requested above is provided in the annual National Pollutant Discharge Elimination System (NPDES) discharge monitoring summary report for the Regional Water Quality Control Board, please provide these reports covering the last five years. Providing these summary reports would meet the above data requests.
 - e. What are the implications for plant cooling of the Second U.S. Circuit Court of Appeals ruling on January 23, 2007, striking down the U.S. Environmental Protection Agency's 316(b) regulations pertaining to the cooling water intake structures of facilities such as nuclear power plants?
2. Please provide copies of documents or reports submitted to public agencies that document the following information. If the specific units and intervals specified below are not used in the documents furnished to other entities, please provide the conversion factor:
 - a. The wastewater disposal system(s) used at the power plant for discharges related to power plant cooling and operations (ancillary purposes), the manufacturer(s), and the year of installation; how do you treat and dispose of the wastewater both from plant cooling and plant ancillary purposes?
 - b. The measures taken and the devices installed on the wastewater disposal system's outfall, to control pollution discharges to municipal systems, receiving waters, or land;

- c. The monthly and annual totals of wastewater that are created from power plant operations in millions of gallons; and
 - d. Provide the daily and monthly average and daily and monthly maximum waste water discharge volumes in gallons or millions of gallons.
- 3. Please submit copies of all reports, letters or other written or electronic communications regarding the following information about the effects of the power plant's operations on endangered fish and wildlife species; power plant operations include plant-specific operations, transmission activities, and once-through cooling; in providing this information, please separate impacts into impacts from plant-specific operations, transmission activities, and once-through cooling and include:
 - a. Copies of any reports provided to local, state or federal permitting, regulatory or trustee agencies that document the "take" of terrestrial, avian, and aquatic wildlife for species subject to state and federal legal protection under the California Fish and Game Code Section 2050 et seq., 16 U.S.C.A. Section 1371 et seq., 16 U.S.C.A. Section 1531 et seq., and 16 U.S.C.A. Section 668 et seq. that occurred as a result of operation of the plant. This includes species protected by the Endangered Species Act (ESA), the Marine Mammals Protection Act (U.S.C.A. 1371 et seq.), and the Bald Eagle Protection Act (16 U.S.C.A. 668)..
 - b. Copies of any reports (2001-2006) provided to local, state or federal agencies (for example, the California Regional Water Quality Control Boards, State Lands Commission, California Coastal Commission, California Department of Fish and Game, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Services, and National Marine Fisheries Service) that document and identify the biomass (by weight) and species composition of fishes, reptiles, and marine mammals killed or otherwise harmed by once-through cooling system (for example., impingement on the intake screens and entrainment).
- 4. Please submit copies of any notices of violation received from local, state or federal regulatory or trustee agencies related to environmental, public health or natural resource issues from the power plant.
- 5. Please provide copies of any feasibility or cost/benefit studies completed within the past five years for devices, technologies, or procedures that would mitigate cooling water impacts on the marine environment. Would it be more cost-effective to install these devices while the plant is shut down for its steam generator replacement, rather than to install these devices during a future, separate closure during which additional replacement power would need to be purchased?
- 6. Please provide copies of any studies, evaluations, or assessments of radioactive material leaks or other hazardous materials discharges, particularly tritium, from the plant. These include: (1) permitted discharges of hazardous materials through the facility NPDES permit, (2) radioactive liquid/gaseous releases within the

guidelines and limits of the Federal Operating License, (3) any “un-permitted” or accidental releases or spills, and (4) general studies on routine plant discharges.

7. What is the impact on plant operations from the proposed new regulations under the Clean Water Act Section 316(b) as promulgated by the State Water Control Board and the U.S. Environmental Protection Agency? Also, how might the Second Circuit Court of Appeals decision on January 23, 2007, regarding 316(b) and the Phase II regulations affect plant operations and compliance costs?

B. Spent Fuel Generation

1. Please provide up-to-date data, specified in terms of number of spent fuel assemblies, for each of the following categories for each plant unit: size of reactor core, spent fuel pool capacity, number of assemblies stored, and remaining capacity. Please provide an estimate of when the power plant will lose full core offload capability. (Diablo Canyon, SONGS 2 & 3, Palo Verde)
2. What is the estimated number of spent fuel assemblies expected to be generated by each unit of the nuclear power plant not accounted for in Question 1 above through the end of the current license period for each unit? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
3. What is the estimated amount, in metric tons of uranium, of spent nuclear fuel expected to be generated through the current license period for each unit? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
4. What is the amount of spent nuclear fuel, in metric tons of uranium, that has been generated to date by each unit? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
5. What is the amount of spent nuclear fuel, in metric tons of uranium, that was generated during the plant’s operating life? (SONGS 1, Humboldt Bay, Rancho Seco)
6. For each of the years 2001-2006, how much spent nuclear fuel was generated by the power plant? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
7. What is the current composition of the spent nuclear fuel in terms of uranium, transuranic elements, short-lived fission products (half-life less than 40 years), and long-lived fission products (half-life of 40 years or greater)? If the current composition is not known in detail, please provide estimated composition, distinguishing among the four categories requested. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
8. What would be the expected on-site inventory of spent fuel at the end of a 20-year license extension? (Diablo Canyon, SONGS 1, 2 & 3, Palo Verde)

9. How much low-level radioactive waste (categorized as Class A, B, or C waste) has been generated at the nuclear power plant? How much low-level radioactive waste will be generated through the current operating license? through the end of decommissioning? Please provide a table with the annual production of low-level waste by Class A, B, C, and Greater-than-Class C waste since the start of the plant's operations. Where and how has it been stored or will it be stored or transported offsite and disposed? What are the current and projected unit and total costs of low-level waste disposal through the term of the current operating license? through the end of decommissioning? For plants currently not operating, provide the total low-level waste generated during the operating lifetime and low-level waste generated during the decommissioning phase. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)

C. Spent Nuclear Fuel Storage

1. What is the amount, in metric tons of uranium, of spent nuclear fuel stored in spent nuclear fuel pools on the power plant site? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
2. How are spent fuel assemblies arranged in the spent fuel pools? For example, are empty fuel cells positioned between the spent fuel assemblies? Are hotter assemblies interspersed with cooler assemblies? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
3. What is the status of the construction and permitting for an onsite Interim Spent Fuel Storage Installation (ISFSI)? Please provide copies of annual status reports filed with the NRC or the California Coastal Commission. (Diablo Canyon, SONGS 1, 2 & 3, Humboldt Bay, Palo Verde)
4. What is the amount of spent nuclear fuel stored at an operational ISFSI? (SONGS 1, 2 & 3, Rancho Seco, Palo Verde)
5. If an ISFSI is operational, how long is spent nuclear fuel cooled in the spent fuel pools before being transferred to the ISFSI? If an ISFSI is planned but not yet operational, how long will spent nuclear fuel be cooled in the spent fuel pools before being transferred to the ISFSI? (Diablo Canyon, SONGS 2 & 3, Rancho Seco, Palo Verde)
6. If an ISFSI is operational, what packaging was used for storing spent nuclear fuel at the ISFSI? Is repackaging of stored spent nuclear fuel anticipated before the spent nuclear fuel can be transported to a permanent geological repository such as Yucca Mountain? Are there facilities onsite to repackage the spent fuel? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
7. If an ISFSI is planned, what are the proposals related to packaging, the compatibility of the packaging with DOE's packaging proposals, and the need for repackaging? (Diablo Canyon, SONGS 1, 2 & 3, Humboldt Bay, Palo Verde)

8. Is any spent nuclear fuel generated by the nuclear power plant stored at any location other than on the site of the nuclear power plant? If so, please provide details (amount, location[s], and dates spent nuclear fuel was transferred to the other location[s]). (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
9. Is any spent nuclear fuel generated by the nuclear power plant unaccounted for? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
10. Please describe what type of storage and/or transport canister is being used for spent fuel stored onsite. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
11. What are the estimated costs and potential risks of relying indefinitely upon onsite interim storage facilities? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
12. What is the combined storage capacity for spent nuclear fuel of the on-site spent nuclear fuel pools and dry storage in a planned or existing ISFSI? If the combined storage capacity is not sufficient to meet spent nuclear fuel storage requirements through the end of the current operating license, describe any alternative storage options under consideration. (Diablo Canyon, SONGS 1, 2 & 3, Humboldt Bay, Palo Verde)
13. Please provide copies of briefs filed by PG&E with the U.S. Supreme Court in its appeal of the Ninth Circuit's decision concerning consideration of terrorism by the U.S. Nuclear Regulatory Commission (NRC) in the National Environmental Policy Act (NEPA) review of its ISFSI. (Diablo Canyon)
14. What is the status of the construction and permitting process for PG&E's temporary pool storage rack? (Diablo Canyon)

D. Spent Nuclear Fuel Transport and Disposal Issues (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)

1. Please provide a description of the utilities' current understanding of the U.S. Department of Energy's (DOE) Yucca Mountain fuel acceptance schedule. Please provide a copy of the most recent information provided to the DOE for the Delivery Commitment Schedule as part of the Standard Contract for Disposal of Spent Nuclear Fuel and/or HLRW. This information should include shipping modes (truck, rail or barge), delivery year, range of discharge dates listed from earliest to latest, and metric tons of uranium.
2. Please provide annual projections of the number of shipments offsite (truck, rail and/or barge) of spent fuel generated during the plant's operating license. Please provide the same projections through a 20-year license extension.

3. Assuming a permanent repository at Yucca Mountain begins operation in 2017, when would shipments of spent nuclear fuel to the permanent repository begin? What is the projected date for the last spent fuel assembly to be transported offsite? To the extent the information requested is the responsibility of DOE rather than the plant operator, please identify the division of responsibilities between DOE and the plant operator.
4. What are the plans for spent nuclear fuel cooling before fuel is transported offsite once a repository or centralized storage facility becomes available, for example, how long will spent fuel be cooled before being transported offsite? Will the "oldest fuel" be transported first?
5. What is the total amount (in dollars) that California ratepayers (or the utility) have contributed to date to the Nuclear Waste Fund for electricity generated by the nuclear power plant?
6. What are the annual contributions in dollars to the Nuclear Waste Fund by each California utility for electricity generated by the plant? If the amount varies by year, please provide a year-by-year breakdown of the amounts contributed.
7. Please describe the status of litigation associated with DOE's non-performance under the Standard Contracts. Please provide a copy of briefs (DOE's and the utility's) and any substantive court rulings filed in the suit specific to the power plant.
8. Please provide any damage estimate studies prepared by the utility as part of litigation regarding DOE performance of its obligations under the Standard Contract. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
9. If a final ruling in the non-performance litigation suit is still pending, what is the amount of estimated damages being sought? How will a damage award be shared by ratepayers and shareholders?

E. Interim Spent Fuel Storage Installations (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay)

1. Federal legislation has been proposed to permit the siting of interim storage facilities on federal or private land in states with nuclear reactors. Is the utility aware of any discussions, evaluations, assessments, or studies of potential interim spent fuel storage sites on federal lands in California? Please provide copies of any evaluations, assessments, or studies of potential interim storage facilities on federal or private land in California.

F. Seismic and Tsunami Issues (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay)

1. Please provide a copy of all studies of seismic issues and tsunami issues related to the plant and spent fuel storage facilities since 1988.
2. Please provide a copy of the Final Safety Analysis Reports (FSARs) that formed the bases for the NRC to grant operating licenses for the plant and for any associated ISFSI, respectively.
3. Please provide a copy of the seismic and tsunami design basis for the plant and associated ISFSI that may not be included in the respective FSARs.
4. Please provide a copy of any testimony on seismic issues and tsunamis that have been filed with the NRC and the California Coastal Commission, and any public reports or presentations that have been provided in other forums (for example, international forums).

G. Steam Generator Replacements

1. What is the current status of the steam generator replacement project? Please provide copies of quarterly or annual status reports or compliance filings that have been submitted to the NRC, the California Coastal Commission, or other state regulatory commission. (Diablo Canyon, SONGS 2 & 3, Palo Verde)
2. What are the expected off-line dates for the power plant due to the steam generator replacement projects? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
3. What are the plans for coordinating plant outages for SONGS and Diablo Canyon during steam generator replacement projects to assure adequate resource availability? (Diablo Canyon, SONGS 2 & 3)
4. What lessons can be learned from the Palo Verde steam generator replacement project and applied to the project at your nuclear power plant? (Diablo Canyon, SONGS 2 & 3)
5. What is the current status of the turbine rotor replacement project? Please provide copies of quarterly or annual status reports or compliance filings that have been submitted to the NRC, the California Coastal Commission, or a state regulatory commission. (Diablo Canyon, SONGS 2 & 3, Palo Verde)
6. What is the current status of the reactor vessel head replacement project? Please provide copies of quarterly or annual status reports or compliance filings that have been submitted to the NRC, the California Coastal Commission, or a state regulatory commission. (Diablo Canyon, SONGS 2 & 3, Palo Verde)

7. Are any other major (greater than \$20 million) retrofit projects planned? If so, please describe. (Diablo Canyon, SONGS 2 & 3, Palo Verde)

H. Decommissioning

1. Please describe the status of current decommissioning projects. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
2. Please provide a copy of the application and associated work papers submitted to a state regulatory commission in the most recent decommissioning-related proceeding. (Diablo Canyon, SONGS 1, 2 & 3, Humboldt Bay, Palo Verde)
3. Please provide a copy of the approved decommissioning plan for Rancho Seco. (Rancho Seco)
4. Please provide a copy of submittals to the NRC over the period 2003-2006 related to decommissioning plans for the nuclear power plant. (Diablo Canyon, SONGS 1, 2 & 3, Humboldt Bay, Palo Verde)
5. Please provide a copy of substantive filings submitted to a state regulatory commission or the NRC over the period 2003-2006 concerning the status of decommissioning the plant, including the status and adequacy of decommissioning trust funds. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
6. What is the status of efforts and plans to remove the SONGS 1 reactor vessel from the site? What are the plans for storage, transport offsite, and disposal of the steam generator, reactor vessel, and any other large radioactive plant components associated with SONGS 1? (SONGS)

I. Performance (Diablo Canyon, SONGS 2 & 3, Palo Verde)

1. For the period 2001 to the present, please provide monthly power production figures, monthly capacity factors, the number of months between each refueling, and the duration of each planned and unplanned outage.
2. Please provide an estimate in dollars of the cost of replacement power during each of the planned and unplanned outages described above.
3. What is the schedule, duration, and purpose of any outages that exceed 15 days that are planned to occur through 2016?
4. Please describe plans for replacing power from the plant if an outage lasts longer than 90 days.
5. If there is a prolonged outage (one year or more) at the plant, what are the contingency plans for replacement power?

6. Please provide electronic copies of NRC inspection reports, licensee events reports, performance evaluations, notices of violations, and Annual Assessment Letters for 2001-2006.
7. Please provide copies of plant evaluations conducted by the Institute of Nuclear Power Operation (INPO) and any INPO Performance Index for the facility from 2001-2006. As for other areas, confidentiality protection will be provided for proprietary information as needed upon identification by the respondent.
8. Please provide any studies or reports that describe the characteristics of the resources that would be needed to replace the plant in terms of baseload capacity and energy, ancillary services, transmission support, grid stability, and local reliability.
9. How would portfolio needs and “best fit” criteria change in the absence of the nuclear facility for short-term (up to 90 days) and mid-term (91 days – five years) procurement?

J. Nuclear Fuel (Diablo Canyon, SONGS 2 & 3, Palo Verde)

1. For how many months into the future does the utility typically contract for nuclear (uranium) fuel? What is the current mix of short-term and long-term fuel supply contracts, where long-term is five years or more?
2. What are the major factors influencing the all-in-cost of uranium fuel to the utility?
3. Please provide a copy of the utility’s most recent forecast for expected uranium fuel prices covering at least the next five years and for 10 years if available.
4. What is the utility’s view of the potential for a shortage of uranium?

K. Nuclear Insurance

1. Please describe the insurance policies concerning nuclear liability claims for these facilities. (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
2. What is the maximum liability for secondary financial protection for any licensed commercial reactor in the United States that experiences a nuclear liability loss? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)
3. Do these facilities have nuclear property, decontamination, and debris removal insurance, and if so what is the maximum coverage? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)

4. Do you have any form of coverage for outage expenses and replacement power costs, and, if so, what is the maximum coverage? (Diablo Canyon, SONGS 2 & 3, Palo Verde)
5. Do you have nuclear liability and property tax insurance for non-certified acts (as defined by the Terrorism Risk Insurance Act) for terrorism-related losses, including replacement power costs, and if so what is the maximum coverage? (Diablo Canyon, SONGS 1, 2 & 3, Rancho Seco, Humboldt Bay, Palo Verde)

L. Relicensing or Plant Retirement

1. If a decision is made to apply for a license extension, when would preparation of a license extension application begin? How much time is needed to prepare an application before it can be submitted? What studies would need to be completed to support such an application to the NRC for a license extension? (Diablo Canyon, SONGS 2 & 3)
2. If PG&E applies for a license extension, what additional studies will be needed beyond the relicensing feasibility study referred to in the utility's pending General Rate Case? (Diablo Canyon)

M. Other Issues (Diablo Canyon, SONGS 2 & 3)

1. What have been the total revenue requirements for the power plant for each year, since an operating license for the facility was issued? Please indicate for each of these years whether the annual revenue requirements were determined through a cost-of-service or performance-based mechanism. Where possible, please break down these revenue requirements into fixed and variable operating costs, capital additions, return on equity, and return of equity (depreciation).
2. What are the projected total plant lifetime costs including costs for plant design and construction, operation, maintenance, fuel, repair and retrofit, emergency response planning, security, insurance, decommissioning, waste storage, transport, and disposal, with and without license renewal?
3. If there is any potential "recapture" associated with the plant operating license, how long would this extend the existing operating license? What is the current status of any attempt to secure such an extension of the operating license?

Appendix A: Application for Confidential Designation